National Aeronautics and Space Administration Advisory Council

Audit, Finance, and Analysis Committee

August 5, 2011

Members:

Mr. Robert Hanisee, Chairman

Hon. William Campbell

Hon. Michael Montelongo

Dr. Howard Stanislawski

Mr. Jeffrey Steinhoff

Audit, Finance & Analysis Committee Abridged Agenda

August 1, 2011

Deputy Chief Financial Officer Update Terry Bowie, DCFO

Financial Statement Update Frank Petersen, OCFO

Quality Assurance Division

Estimating Asbestos Remediation Liability Bruce Ward, Associate DCFO

Administrative Savings Lisa Ziehman, OCFO Budget Division

Financial Systems Initiatives Nadine Tremper, OCFO Systems Division

Project Management Update (Performance Reporting)

Jessica Southwell & Brian Card,

OCFO Strategic Investments Division

Budget Update Andrew Hunter, DCFO

Agency Budget, Performance, and

Strategy

Ames Research Center CFO Update Paul Agnew, CFO, Ames Research Center

DCFO Update

• • DCFO Update

- Met with PwC Engagement Partner (Walt Fennell)
 - no new issues have been raised
- PwC met with and reviewed the predecessor auditor's (E&Y) working papers
- Agency -wide estimate for asbestos remediation back on the table
 - Two alternative approaches
 - Building by building survey
 - Estimation algorithm

Committee: Make Sure NASA approach is fully vetted with PwC, OIG, and FASAB

• • DCFO Update

NASA OCFO Strategic Plan

3 major objectives

Communication

Training

Value added analyses

- New Property, Plant, and Equipment
 - NASA is scheduled to inherit via transfer from the U.S.
 Army real property and 163 buildings at Stennis
- Shuttle Property
 - Most written off
 - Repair and maintenance
 - Storage
 - Close out contracts

Financial Statement Audit and Internal Control Update

• • Items Covered

- ➤ The Past Decade of Audit Results at a Glance
- ➤ A Comparative View of NFRs
- ➤ Focus Areas for Fiscal Year 2011
- ➤ Status & Highlights of Fiscal Year 2011 Audit
- ➤ Interim Results of FY 11 Financial Statement Audit
- > Typical Audit Timeline
- ➤ OMB Circular A-123 (Management Assessment of Internal Controls) Review Status & Results
- Improper Payments Elimination and Recovery Act (IPERA) Review Status & Results

The Past Decade of Audit Results At A Glance

Fisc	al Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Inde	ependent Auditor	PwC	PwC	PwC	E&Y	PwC						
Aud	it Opinion	D	С	D	D	D	D	D	D	D	Q	?
Internal	PP&E	MW	SD									
	Environmental Liability Estimation	RC	_	_	RC	RC	_	_	_	SD	SD	
Control Deficiency	Federal Financial Management Improvement Act (FFMIA)	RC	RC	RC	RC	RC	_	_	-	SD	_	
ficiency	Financial Information Technology	RC	RC	RC	_	_	-	-	-	_	_	
	Financial Statements Preparations Process & oversight	RC	MW	_	_							
	Fund Balance with Treasury	_	_	MW	MW	MW	_	_	_	_	_	
	General Control Environment		_	_	MW	_	_	_	_	_	_	Q



- Walkthroughs & Internal Control documentation completed
- Internal Control and Substantive Testing at NASA centers is underway
- In addition to the Defense Contract Audit Agency (DCAA) performing agreed upon procedures (AUP) for NASA contractor held Property Plant & Equipment (PP&E), the financial statement auditors (PwC) are performing audit testing of PP&E held at contractor sites

Interim Results of FY 11 Financial Statement Audit

Strengths noted for the Information Technology (IT) portion of the audit:

- IT Control environment is mature
- IT Control environment strengths identified by auditor including: appropriately configured clients settings, restricted access, and enforcement of strong password requirements
- Policies and procedures align with requirements
- Centralized accounting management system
- Usage of automated tools, versus manual processes, to manage key IT processes
 - analysis for Segregation of Duties
 - disaster recovery documentation
 - certification and accreditation activities

Typical Audit Timeline

	Financial Statement Audit Timeline													
March	April	May	June	July	Aug	Sept	Oct	Nov	Dec					
Plan	ining													
	Internal C	ontrol Docu	mentation											
	In	iternal Contr	ol Testing (C	Seneral Audi	t Area and I ⁻	T)								
	Substantive Testing													
	Reporting													

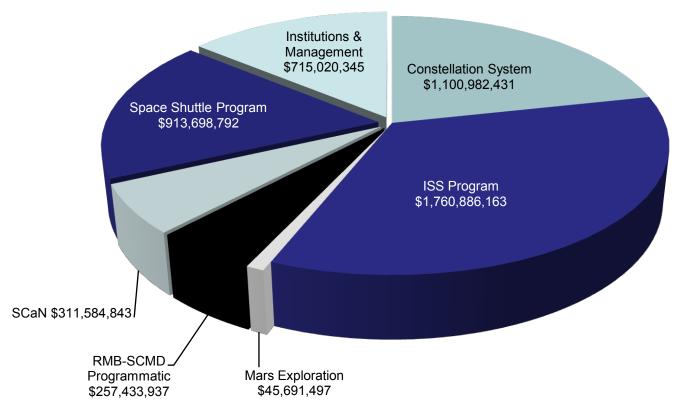
• • A-123 Review Status & Results

- Walkthrough documentation, design assessment and testing completed for FY 2011
- Draft FY 2011 interim report is under management review
- No Material Weaknesses noted
- Corrective actions already put in place for several of the findings
- Additional limited Year-End testing for FY 2011 scheduled to be completed by September 30
- Final draft of FY 2011 assessment report due Aug. 31
- Final report and Statement of Assurance due Nov. 15

Improper Payment Elimination and Recovery Act (IPERA) Status & Results

Total Outlays for Programs Susceptible to a High Risk of Improper Payments

Total Payments by Program



Improper Payment (IPIA) Status & Results (contd.)

Total Payments by Population, sample amount and annual estimate of improper payments by program

Program	Trans	sactions	Dol	lars	FY 2011 % Estimate of Improper	FY 2011 \$ Estimate of Improper
	Population Sample		Population Sample		Payments	Payments
Constellation Systems	84,574	320	\$1,100,982,431	\$437,502,971	0.13719%	\$1,510,548
Institutions and Management	48,327	316	715,020,345	323,881,366	0.00000%	\$0
ISS	36,928	366	1,760,886,163	1,229,579,005	0.00000%	\$0
Mars Exploration	5,644	157	45,691,497	31,475,246	0.00000%	\$0
RMB-SCMD Programmatic	11,657	139	257,433,937	183,205,939	0.00000%	\$0
SCaN	14,343	211	311,584,843	174,642,773	0.00000%	\$0
Space Shuttle	42,940 279		913,698,792	563,647,091	0.00000%	\$0
Total	244,413	1,788	\$5,105,298,008	\$2,943,934,391	0.02959%	\$1,510,548

Improper Payment (IPIA) Status & Results (contd.)

Improper Payments Identified by NASA Program

Finding – Discount not taken									
Program	Improper Payment Amount Over (Under)	# of Payments							
Constellation Systems	\$ 2,343.87	1							
Total	\$ 2,343.87	1							

Financial Statement Audit & Internal Controls

- No show stoppers for the Financial Statement Audit
- Tight audit timeline for remainder of the year
- New guidance was issued on IPERA and NASA is in compliance with a 0.03% estimated improper payment rate
- IPERA results show no high dollar overpayment
- On track for Unqualified Statement of Assurance (for the A-123 assessment)

Estimating NASA's Asbestos Remediation Liability

Terms of Reference

- Friable asbestos materials are the ones that are most dangerous. They easily release asbestos fibers into the air, and these fibers pose a significant health risk to anyone nearby.
- Non-friable asbestos is less likely to release fibers. Roofing material, for example, is a non-friable asbestos-containing material because the asbestos fibers are bound or locked into place. Non-friable asbestos is still a health risk, as it can be made friable if damaged or altered.
- ACM means <u>Asbestos Containing Material</u>
- **ACM Unit** means *Square foot* of ceiling/floor tile; or *Linear foot* of ducting; or *Individual Unit* (e.g., a valve)

Terms of Reference (cont'd.)

- Asbestos is a set of six naturally occurring silicate minerals exploited commercially for their desirable physical properties. The inhalation of asbestos fibers can cause serious illnesses, including malignant lung cancer, mesothelioma (a formerly rare cancer strongly associated with exposure to amphibole asbestos), and asbestosis (a type of pneumoconiosis). Long exposure to high concentrations of asbestos fibers is more likely to cause health problems.
- Friability is the degree to which a solid substance can be broken up into smaller pieces with a minimum of effort. In the case of asbestos, friable usually refers to whether the mineral can be broken down by a human hand.

Federal Accounting Standards Advisory Board (FASAB) Requirements

Federal entities will (1) estimate both friable and non-friable asbestos-related cleanup costs and (2) recognize a liability and related expense for those costs that are both probable and reasonably estimable, consistent with the current guidance.¹

Estimates will be developed for federal facilities and installed equipment, including general PP&E, heritage and stewardship assets. ²

For purposes of developing asbestos cleanup cost estimates, assumptions can be made in some cases to make up for a lack of actual data.³

The guidance in Technical Bulletin 2006-1 will be effective for periods beginning after September 30, 2011.4

¹ FASAB Technical Bulletin 2006-1, *Recognition and Measurement of Asbestos-Related Cleanup Costs*.

^{2, 3} FASAB Technical Release 10, Implementation Guidance on Asbestos Cleanup Costs Associated with Facilities and Installed Equipment.

⁴ FASAB Technical Bulletin 2009-1, Deferral of the Effective Date of Technical Bulletin 2006-1, *Recognition and Measurement of Asbestos-Related Cleanup Costs.*

• • NASA Assumptions

- Certain NASA real property and Heritage assets may be reasonably likely to incur asbestos-related cleanup costs; personal property is probably not
 - Real property consists of buildings, facilities, and other infrastructure that are institutional, have a unit acquisition cost of \$100k or more, a useful life of 2 or more years, and are presumed to have an alternative future use (NPR 9250.1B)
 - Property like runways, roads, street lights, sidewalks, and electrical distribution systems are not reasonably likely to have asbestos-related cleanup costs
 - Heritage assets with the characteristics of real property may also be reasonable likely to have asbestos-related cleanup costs
 - Only property constructed before 1981 is reasonably likely to have asbestos-related cleanup costs

NASA Assumptions (cont'd.)

- Cleanup cost estimates (liabilities) are related to removal or containment of asbestos, not maintenance of existing ACM (which is expensed)
- NASA locations and buildings are "like enough" to have similar asbestos profiles
- Number and size of buildings will vary by location

Current Situation

- Wide variation in information at the ten NASA Centers and other facilities regarding the location and amount of asbestos
- Some have information on the type and amount of asbestos down to the room, others only know that asbestos may be present in a specific building
- Marshall Space Flight Center (MSFC) has the most complete information, including location, type, quantity and estimated ACM abatement cost
- 3 Centers/facilities have identified specific instances of asbestos (location, type, and quantity)
- 4 Centers/facilities have identified buildings with asbestos (location)

Estimation Approach

Build a model based on data about known asbestos collected at "model" Centers (e.g. MSFC) to estimate quantity and cost of probable asbestos at individual Centers

Extrapolate that cost across remaining Centers

Update the model as more information becomes available (new surveys, buildings are renovated or demolished)

Estimation Approach (cont'd.)

- Pluses
- Uses currently available information from Centers/facilities to extrapolate the quantity of asbestos and the estimated cleanup costs by Center/facility
- •Considers the estimated abatement cost based on the current estimated quantity of asbestos in the real property asset not the incremental cost to demolish or renovate due to the presence of asbestos identified only at disposal/renovation

- Minuses
- More complicated to explain, calculate, and maintain
- Relies on information from non-financial databases

FY 2011 Asbestos Cleanup Cost Estimate

Estimated Friabl	e and Non-Friable A	CM Ahateme	nt Cost by Loca	ntion				
	bestos-Related Informa							
I	Facilities with Pro	bable ACM		Estimate	ed ACM Units	Estimated ACM Abatement Cost		
Location	Estimated by the Center	# of Real Property Assets Constructed before 1981	Estimated Total Sq Ft of Facilities with Probable ACM (1)	Estimated by the Center	Estimated by the Model (2) (Total Sq Ft x 1.6 ACM units/sq ft)	Cost Index (3) (Relative to MSFC - Huntsville, AL)	Estimated ACM Cost at the Location (4) (Est ACM Units x \$3.31 cleanup cost rate/unit x Cost Index)	
ARC		146	4,810,305		7,696,488	1.28	\$ 32,608,480.36	
DFRC	13		471,364		754,182	1.28	\$ 3,195,319.99	
GSFC	29		1,803,154		2,885,046	1.03	\$ 9,835,988.69	
GRC	82		2,249,079	8,139,608	, , , , , , , , , , , , , , , , , , , ,	1.12	\$ 30,175,154.78	
JPL		75	, ,	2,202,000	3.158.954	1.28	\$ 13,383,854.61	
JSC		112	, , , , ,		6,052,232	1.09	\$ 21,835,847.83	
KSC	191	112	6,050,446	3,104,188	0,032,232	1.13	\$ 11,610,594.38	
LaRC	52		2,680,332	3,104,100	4,288,531	1.03	\$ 14,620,887.72	
MSFC	102			7,766,574	7,200,331	1.00		
	102		3,389,365	7,760,574	4.005.754		\$ 25,696,563.50	
Plum Brook (GRC)		39	, ,		1,865,754	1.12	\$ 6,916,724.48	
Santa Suzanna (MSFC)		7	57,701		92,322	1.28	\$ 391,148.15	
SSC	37		1,400,977		2,241,563	0.96	\$ 7,122,791.22	
WALLOPS (GSFC)	10		229,312	111,838		1.03	\$ 381,289.29	
WSTF (JSC)		9	42,382		67,811	0.92	\$ 206,498.67	
Total	516	388	30,107,504	19,122,208	29,102,883		\$ 177,981,143.68	
	indicates estimate based on qu basis for cost model	antity or cost model (see below)					
Model								
(1) Facility Sq Ft (2) ACM Units per Sq Ft	Where NASA records did not p Avg ACM per Total Sq Ft	1.60	based on GRC, KSC, MS					
(3) Location Cost Index (4) Cost per ACM Unit	Cost Index basis is MSFC (=1) Avg Cost per ACM Unit		based on MSFC only				26	

Administrative Savings

Background

- Accountable Government Initiative (Sept 2010); Executive Order "Delivering an Efficient, Effective and Accountable Government" (June 2011)
 - Campaign to Cut Waste root out waste from every agency in government
 - Common sense, pragmatic steps to cut costs and eliminate unnecessary or antiquated practices
 - Program terminations, eliminate duplication, administrative overhead savings
 - Curb contract spending, leverage purchasing power, dispose of unneeded Federal real estate, reduce Federal data centers, reduce improper payments, etc.

Background (cont'd.)

- Planning, Programming, Budgeting and Execution (PPBE) for FY12 budget pass back, Office of Management and Budget (OMB) called for NASA to provide a plan to achieve savings in administrative activities in FY12
 - Advisory & assistance services
 - Travel & transportation of people
 - Transportation of things
 - Printing & reproduction
 - Supplies

• Current Assumptions

- Confirmed \$100m as targeted savings in OMB-directed "administrative" accounts
 - ~.5% of NASA budget
 - ~5% of NASA budget for selected "administrative" functions
- Confirmed "transportation of things" account can be excluded (any reduction would significantly impact mission commitment to commercial cargo); larger reductions in other accounts
- Developed 3 reduction scenarios
 - FY11 estimate/projection in FY11 PPBE (est. '10 & '11)
 - FY11 estimate/projection in FY12 PPBE (est. '11 & '12)

Reduction Scenario 1 –OMB selected accounts

•	FY11 PPBE				FY12 PPBE	
	FY11 Projection/Esti	Projection/Esti	% Savings of OCC \$ to Total Savings \$	FY11 Projection/Esti		OCC \$ to
OBJECT CLASSES						
21 Travel & transportation of persons	\$17	20.0%	16.9%	\$18	3 20.0%	17.5%
22 <mark>Transportation of things</mark>	\$0	0.0%	0.0%	\$0	0.0%	0.0%
24Printing and reproduction	\$1	10.0%	0.8%	\$1	10.0%	0.7%
25.1Advisory and assistance services	\$66	10.0%	65.5%	\$69	8.5%	67.6%
26 Supplies and materials	\$17	11.0%	16.9%	\$15	10.0%	14.2%
	\$101		100.0%	\$102		100.0%

Reduction Scenario 2 – OMB directed accounts & NASA selected account

•							
	FY11 PPBE					FY12 PPBE	
	\$ Savings - FY11 Projection/Esti	Projection/Esti	% Savings of OCC \$ to Total Savings \$		\$ Savings - FY11 Projection/Esti	Projection/Esti	% Savings of OCC \$ to Total Savings \$
OBJECT CLASSES							
21 Travel & transportation of persons	\$17	20.0%	16.7%		\$18	20.0%	17.7%
22 <mark>Transportation of things</mark>	\$0	0.0%	0.0%		\$0	0.0%	0.0%
24 Printing and reproduction	\$1	10.0%	0.8%		\$1	10.0%	0.7%
25.1Advisory and assistance services	\$26	4.0%	25.9%		\$36	4.5%	36.3%
25.2 Other services	\$ 41	5.0%	39.8%		\$31	4.0%	31.0%
26 Supplies and materials	\$17	11.0%	16.7%		\$15	10.0%	14.4%
	\$102		100.0%		\$101		100.0%

NOTES:

- To reduce the impact of possible reductions to Advisory & Assistance Services, included Other Services as additional category to possibly reduce.
- OMB agreed that including Other Services meets the intent for reducing "administrative" functions.

Reduction Scenario 3 – OMB directed accounts & NASA selected accounts

adddanta							
	FY11 PPBE				FY12 PPBE		
(\$m)	\$ Savings - FY11 Projection/Esti mate	Projection/Esti			\$ Savings - FY11 Projection/Esti mate		% Savings of OCC \$ to Total Savings \$
OBJECT CLASSES							
21 Travel & transportation of persons	\$17	20.0%	16.7%		\$18	3 20.0%	17.8%
22 Transportation of things	\$0	0.0%	0.0%		\$0	0.0%	0.0%
24 Printing and reproduction	\$0	5.0%	0.4%		\$0	5.0%	0.3%
25.1 Advisory and assistance services	\$13	3 2.0%	12.9%		\$8	1.0%	8.1%
25.2 Other services	\$16	2.0%	15.9%		\$8	1.0%	7.8%
25.4 Operation and maintenance of facilities	\$41	2.0%	40.4%		\$42	2.0%	41.8%
25.7 Operation and maintenance of equipment	\$6	1.0%	6.1%		\$17	2.0%	17.0%
26 Supplies and materials	\$8	5.0%	7.6%		\$7	5.0%	7.2%
	\$102		100.0%		\$100		100.0%

NOTE:

 To reduce the impact of possible reductions to Advisory & Assistance Services and Other Services, added Operation & Maintenance of Facilities and Equipment as additional categories to possibly reduce.

Administrative Savings Committee Observations

Significant reduction of contractor personnel opens the question of footprint and further cost reductions internal to NASA

- House mark for FY2012 budget is \$16.8 billion
- Near to long-term federal budget reduction portends ever more difficult budget challenges
- Cost takeout/affordability will be increasingly more important
- House bill does not have a provision that prohibits Reduction In Force (RIF)

Infrastructure costs are candidates for cost reduction

 With the changes in NASA programs and reductions in contractor personnel, it is a good time to ensure that NASA is not paying for unneeded facilities, phone lines and other infrastructure

Administrative Savings NASA Next Steps

- Confirm FY11 base with OMB
- Determine which option to implement
- Develop implementing guidance to Mission Directorates and Centers
- Further investigation into latest guidance from OMB/Office of FPP regarding 15% cut to spending on management support service contracts over the next 14 months; anticipate some overlap with "admin savings"
- Recommend continued review of Object Class Code assignment to ensure proper use according to current OMB classification (OMB circular A-11); e.g., admin support services mapped to 2520 (other services) when it should be mapped to 2510 (advisory & assistant services)



Considerations in Current Environment

- Outlook. Current NASA out year budget targets are flat.
 - Majority of external budget scenarios would result in a reduction to current NASA out year budget profile.
- Priorities. Continued divergent positions on budget priorities among NASA stakeholders hampers clear prioritization under constrained budgets.
 - FY10 Authorization will continue to guide our budget priorities
- *Hard Choices.* NASA must be prepared to implement its programs with reduced funding and make hard choices otherwise it will be done for us.
 - Thus, any over-guide request for required budget content will necessitate reprioritization of baseline content – we must be prepared to show what we are willing to give up.
- Near-term. Assume a 3-4 month CR as we transition from FY11 to FY12.

Agency Budget Status Overview

Agency Overall Status:

- 1. **FY11 Execution**: Initial operating plan was cleared, with some adjustments.
- 2. Funds distribution increased significantly in May and June.
- 3. **FY12 Adoption**: House appropriation committee did approve the CJS bill (7/13).
- 4. FY13 Formulation: Final Decisions and position to OMB being prepared

Concerns:

- House appropriations mark, and resolution with the Senate
- Preparing for a 3 4 month FY 2012 Continuing Resolution (CR)

FY 2012 Funding Comparisons and compared with FY11 Operating Plan

					(13-Jul-11)		
	Auth Act		FY 2012		House CJS	FY11 Initia	I
	PL 111-267		Budget		Mark	Op Plan	
	(11-Oct-10)		(14-Feb-11)		(07-Jul-11)	(15-Jun-11	<u>) </u>
Science	5,248.6	-231.8	5,016.8	-512.8	4,504.0	4,931.	7 -427.7 *
Aeronautics	584.7	-15.3	569.4	+0.5	569.9	533.	5 +36.4
Space Technology	486.0	+538.2	1,024.2	-649.2	375.0		+375.0
Exploration	5,252.3	-1,303.6	3,948.7	-299.7	3,649.0	3,928.	6 -279.6
Space Operations	4,141.5	+205.4	4,346.9	-282.9	4,064.0	5,320.	9 -1,256.9
Education	145.8	-7.4	138.4	-0.4	138.0	145	4 -7.4
Cross-Agency Supt	3,189.6	+2.4	3,192.0	-142.0	3,050.0	3,130.	7 -80.7
CECR	363.8	+86.6	450.4	-26.4	424.0	420.	9 +3.1
OIG	37.8	-0.3	37.5	-1.2	36.3	36.:	3 -0.0
TOTAL	19,450.0	-725.7	18,724.3	-1,914.0	16,810.3	18,448.	-1,637.8

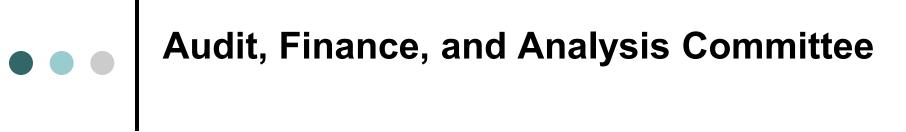
^{*} House mark for Space Technology of \$375M is about \$26M higher than the \$349M funded in FY11 in CAS and SOMD

Ames Research Center Office of the Chief Financial Officer Overview

Ames CFO Workforce Profile

- 100 civil servants (plus 52 contractors)
- Age (Average age is 50.8)
 - 0 60+ (25%)
 - 0 50-59 (30%)
 - 0 40-49 (29%)
 - 0 30-39 (13%)
 - Under 30 (3%)
- Diversity
 - Total Female or Minority (88%)
 - Non-minority Male (12%)
 - Non-minority Female (19%)
 - Minority Male (16%)
 - Minority Female (52%)
 - Employees Age 40 and Older (84%)

- Education
 - Masters (8%)
 - Bachelors (60%)
 - Associates (10%)
 - No Degree (22%)
- Occupational Distribution
 - Professional Administrative (100%)



No specific recommendations at this time

Suggestion: Shuttle retirement and contractor reductions

Appoint a task force to make sure that all utilities, phone lines, terminal seats and software licenses (being paid for by NASA) are terminated.